

DCM TIME WINDOW™ INSTRUCTION SHEET

Before unpacking your Time Windows, please note that they should be handled by their wooden tops, because touching the moving elements (located on the top one-third of the faces) could damage them.

After unpacking your new Time Windows, save the boxes and all packing materials. It is a good idea to slit the tape and flatten the boxes after removing the plywood and foam endcaps. At this time you should fill in both warranty cards, putting both serial numbers and date of purchase on both cards. Serial numbers are stamped on the upper edge of the bottom wood trim, and are also marked on the tops of the boxes. Mail only *one card*, and keep the other card for your records.

The best location for the Time Windows is usually with them facing the longest dimension of the room, approximately three feet from the wall behind them. This usually gives the tightest and flattest bass. Place the Time Windows as far as practical from other walls or objects. Three or four feet from the side walls is fine, but slightly less is all right if you would have to place the speakers too close together to achieve this. Sometimes you must compromise on speaker placement to fit your room decor. In any event, it is a good idea to leave some extra wire so you can experiment with placing your Time Windows for best sound in your room.

Once you have decided on the approximate location for your Time Windows, measure out enough (plus a little extra) speaker wire. For best results, speaker wire should be 18 gauge or heavier (lower numbers indicate heavier wire), and should be color coded for ease in keeping track of polarity (plus and minus) in the system. Some speaker wire is colored gold for "plus"; other kinds have a ridge or stripe on the insulation to indicate plus.

Before connecting anything, *turn off your amplifier and unplug it from the wall.*

Remove about one-half inch of insulation from each end of the wires. Be careful not to score the strands of wire in each conductor. Carefully twist the exposed strands of wire so that a stray strand cannot possibly connect the plus and minus sides of the speaker wire, either at the amplifier end or the speaker end of the wire. Now connect one end of each wire to the double banana plug which is furnished with each Time Window. If you are unfamiliar with this type of plug, refer to the illustration. Use a small screwdriver, such as the one often furnished with phono cartridges. Double banana plugs are standard laboratory instrument connectors, and extra plugs can be obtained from local electronics stores, or from your dealer. In the event you are missing a plug, a *temporary* connection can be made by *carefully* inserting the wires directly into the jacks on the back of the Time Windows, bunching up the conductors so that they will stay put.

To connect the wire to the plug, back off the screws to expose the holes for the wires. The "minus" conductor is inserted into the side of the plug with the "GND" tab, and the "plus" conductor into the other side. Again, be sure that no exposed strand of wire can reach the other conductor. Now, simply tighten the screws to fix the wires in place.

Connect the other end of each wire to the appropriate terminals on your amplifier, the "plus" conductor to the "plus" terminal, and "minus" to "minus" or "ground". If in doubt, consult the amplifier's instructions. Make connections carefully and firmly so that there will be no chance of a short circuit.

Now connect the Time Windows by inserting the plugs into the jacks at the bottom rear of each Time Window. Insert the plugs with the "GND" tab down, so that the "plus" wire goes to the red, or upper, jack on the Time Window, and the "minus" wire to the black, or lower, jack. The Time Windows should now be connected and correctly phased. Now you may plug in your amplifier.

To verify the phasing of the system, move the Time Windows close together (less than a foot apart). Now play a record or tape with the system switched to Mono, or tune in a Mono broadcast or play a Mono record with your system in Stereo mode. After listening for a few moments, reverse one of the speaker plugs. If the sound image between the Time Windows deteriorates and the bass response is less, the speakers were correctly phased in the first place. Return the reversed plug to its correct placement, put the Time Windows back in place and *enjoy!!*

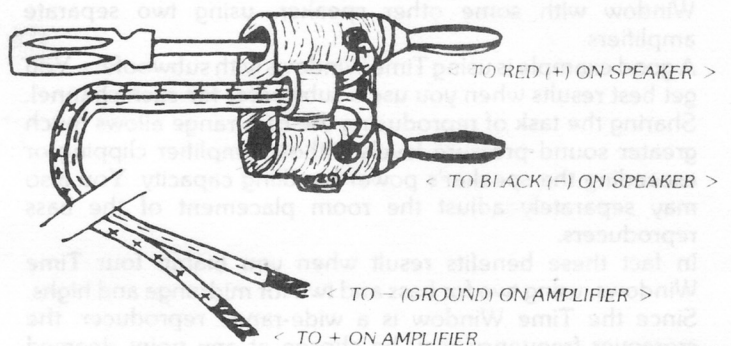
Please use no solvents to clean the finish of your Time Windows. We recommend Guardsman or Johnson's Paste Wax. Do not place the Time Windows near radiators or any other direct heat sources, nor in direct sunlight which may bleach the wood and fade the grilles. Drinks may leave water marks on the wood. If you wish to have a plant or other object on top of the Time Window, protect the finish by putting a cloth or even several layers of paper towel under the object. Be careful when watering plants!!

The speaker grilles are designed to stay in place. Occasionally, however, they may slip. If this happens, push it gently with the palm of your hand at the center and side points, working from the middle of the cabinet to the ends, or vice versa, until the grille is properly positioned and the edges are straight. To remove lint, we suggest using masking tape, being careful of the moving elements. Never use a vacuum cleaner.

Our warranty records have proven that Time Windows are very reliable. Should they require service, consult your dealer. If your dealer is at an inconvenient distance, please contact DCM Corporation directly.

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QUESTIONS AND ANSWERS

This section answers questions most frequently asked about the more technical aspects of your Time Windows. If your questions are not covered, please contact your dealer, who will be glad to answer them.

Q: What are the power requirements and power handling ability of my Time Windows?

A: Your speakers are designed to be used with a wide range of associated components. Since Time Windows are quite efficient, a ten watt per channel receiver can be expected to produce adequate loudness for most listeners. Time Windows also have excellent power handling capability. In normal use, large amplifiers of up to 200 watts per channel will not harm the speakers.

It should be noted here that if the speakers are to be used with amplifiers having a rating of over 80 watts R.M.S. per channel, we recommend fusing. Use a 2, 2½, or 3 amp fast blow fuse in series with the "plus" wire. If you have any questions as to how to do this, consult your dealer.

Q: What kind of associated equipment do you recommend to get the best sound from Time Windows?

A: While excellent sound quality may be had with inexpensive equipment, the superior time resolution capability of your Time Windows will allow you to appreciate the quality of the best equipment and recordings. In recommending equipment, we therefore advise that you first consider sound quality (determined by listening) as having greater priority than amplifier power. We also recommend that you invest in a top quality cartridge, since this component, besides the speakers, does the most to improve the quality of your sound.

Q: Will heavier speaker wire improve the sound of my Time Windows?

A: Time Windows are designed to be properly damped with .25 ohm resistance in the speaker wire between them and the amplifier. This means that 18 gauge wire is optimum in a 20 foot length, or, with a 3 amp fast blow fuse, in a 15 foot length. Using heavier wire will not significantly overdamp the woofers, and can of course increase the power delivered to the speakers by as much as 5%.

Q: How do I bi-amplify Time Windows?

A: The Time Windows woofers and tweeters may not be individually connected to their own amplifiers, since the crossover filters are not "standard". A standard (6, 12 or 18 db per octave) electronic crossover will not preserve the special phase and impedance characteristics required to compensate and blend the drivers units' outputs. The Time Window itself must be used as a single integrated full range unit.

Biamping still makes sense when you combine the Time Window with some other speaker, using two separate amplifiers.

A good example is using Time Windows with subwoofers. You get best results when you use a subwoofer for each channel. Sharing the task of reproducing the bass range allows much greater sound pressure levels without amplifier clipping or exceeding the speaker's power handling capacity. You also may separately adjust the room placement of the bass reproducers.

In fact these benefits result when you biamp four Time Windows, using two for bass and two for midrange and highs. Since the Time Window is a wide-range reproducer, the crossover frequency may be chosen at any point deemed necessary by considerations of your particular application. A 6 db per octave electronic crossover filter to separate the signal inputs to your power amps will best preserve the coherent phase characteristics of your Time Windows.

Q: Where in my room should my speakers be placed for the best sound?

A: The best way to find out is to experiment, but we have a few bits of knowledge which will give you a starting point.

First: The design of the transmission line in the Time Window takes into account the first reflection of sound from a wall behind the speakers. Hence the speaker, for flattest bass, requires a wall behind it. Furthermore, the correct distance (for which the enclosure is designed) is three feet from the wall to the back of the speaker. Moving the speaker back and forth from this distance will "tune" the response for correcting variations in room acoustics.

Placing the speakers near the corners or side walls will emphasize the response above 50 Hz. Therefore, we recommend keeping the speakers at least three feet from walls beside the speakers.

Second: The best bass is usually obtained by placing the speakers facing the longer dimension of your room with large openings (doors, stairwells, windows, curtains) behind the listener. This is because sound reflected from a wall behind the listener produces severe cancellations in the bass response. Anything you can do to lessen these reflections will improve the smoothness and depth of the bass. For the same reason, facing the speakers across a narrow room often results in very weak bass. If such an arrangement is necessary for room decor, even a separate "subwoofer" added to your system will work properly *only* if it is placed correctly to achieve the desired bass response.

Third: The best stereo imaging occurs when you point both Time Windows in the same direction, that is symmetrically. In most cases they sound best pointing straight ahead, so that you are sitting from 20 to 60 degrees off axis of each speaker. Pointing the speakers directly at you "closes in" the image, making it more midrangy and forward. Pointing the speakers slightly away from you gives more ambience and depth to the sound. If your room is bare and has hard walls, you may find the speakers sound best almost pointing toward each other across the room. By turning the speakers you are varying the ratio and quality of the direct and reflected sound you hear at your listening chair.

Physical and Technical Data

Dimensions:

36 inches high X 14¾ inches wide X 11¾ inches deep
91.5 cm. high X 37.5 cm. wide X 30 cm. deep

Weight:

32 pounds net; 40 pounds shipping weight
14.5 kg. net; 18.2 kg. shipping weight

Power requirements:

10 watts recommended minimum per channel (sensitivity 89 db/watt at one meter on axis)
200 watts R.M.S. maximum (integrated program material)
50 watts R.M.S. pink noise (continuous) maximum (20 Hz-20 kHz)

Impedance:

5 ohms minimum
6 - 8 ohms nominal

Frequency range:

25 Hz to 18 kHz

Dispersion:

180 degrees horizontal
60 degrees vertical